

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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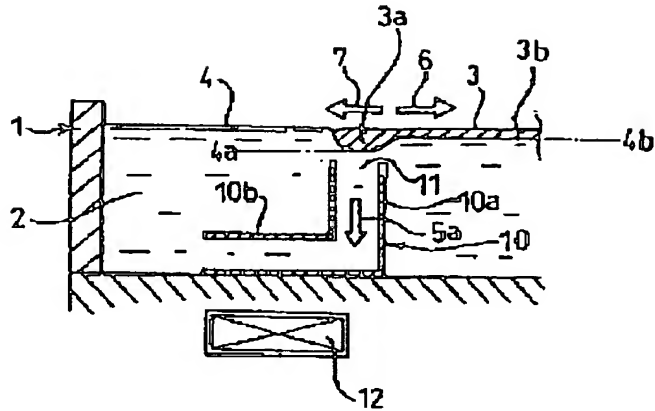
APPLICATION DATE : 27-04-98  
APPLICATION NUMBER : 10117290

APPLICANT : ASAHI GLASS CO LTD;

INVENTOR : UEHORI TORU;

INT.CL. : C03B 18/08 C03B 18/20

TITLE : PRODUCTION OF PLATE GLASS AND  
DEVICE USED FOR THE  
PRODUCTION



ABSTRACT : PROBLEM TO BE SOLVED: To form the grooves or ridges of a melted metal at both the lateral edge portions of a melted glass flow to hold the edge portions of the belt-like melted glass flow, and shut off the atmosphere of a space on a melted metal bath covered by the belt-like glass flow to prevent the adhesion of a metal oxide to the surface of the belt-like glass flow and prolong the life of a heater.

SOLUTION: When a melted metal flow 5a flowing to the bottom of a melted metal bath 2 in the approximately vertical direction based on the surface 4 of the bath 2 is generated, a negative pressure is generated on the lower surface of a glass edge holding portion 3a, and the melted metal bath surface level 4 of the holding portion 3a is lower than the bath surface level 4b at the central portion to form a lower bath surface level 4a. The melted glass flows toward the lower bath surface to form the thicker holding portion 3a than the central portion. The thickness deviation produces an attracting force 7, which compensates the contraction force 6 of the belt-like glass flow in the lateral direction due to its surface tension. Thus, the edge of the belt-like glass flow is held at the position. The atmosphere of a space on the melted metal bath covered with the belt-like glass flow is filled with an inert gas.

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**AP - JP19980117290 19980427**

**CPY - ASAG**

**DC - L01**

**FS - CPI**

**IC - C03B18/08 ; C03B18/20**

**MC - L01-D03**

**PA - (ASAG ) ASAHI GLASS CO LTD**

**PN - JP11310421 A 19991109 DW200012 C03B18/08 007pp**

**PR - JP19980117290 19980427**

**XA - C2000-039781**

**XIC - C03B-018/08 ; C03B-018/20**

**AB - JP11310421 NOVELTY** - The groove or ridge of the molten metal is formed near the edge (3a) of the cross section of the strip shaped glass (3) which is maintained to a position. The gas, above the area not covered by the molten glass and the area covered by the molten glass, are made to interrupt on the surface of molten metal bath (2).

- **DETAILED DESCRIPTION** - The flow of molten metal in a bath is controlled, to compensate the strength of glass when it is spreading or narrowing during groove or ridge formation. An **INDEPENDENT CLAIM** is also included for glass plate manufacturing apparatus.

- **USE** - For manufacturing glass plate.

- **ADVANTAGE** - Since the oxide on upper surface of glass area is removed with stability using vaporizing substrate on area not covered by glass, adherence of molten metal on glass is prevented reliably. Since the upper surface of the glass is made into inert gas atmosphere the consumption of reducing gas resource such as hydrogen is suppressed. The effect of purification of reducing gas is improved, as the gas concentration in upper side of glass increases.

- **DESCRIPTION OF DRAWING** - The figure shows the cross- sectional drawing of glass plate manufacturing apparatus. (2) Molten metal bath; (3) Strip shaped glass; (3a) Glass edge.

- (Dwg.2/7)

**IW - GLASS PLATE MANUFACTURE METHOD FORMING GROOVE RIDGE MOLTEN METAL EDGE STRIP SHAPE GLASS MAINTAIN POSITION GAS ABOVE GLASS MOLTEN METAL INTERRUPT**

**IKW - GLASS PLATE MANUFACTURE METHOD FORMING GROOVE RIDGE MOLTEN METAL EDGE STRIP SHAPE GLASS MAINTAIN POSITION GAS ABOVE GLASS MOLTEN METAL INTERRUPT**

**NC - 001**

**OPD - 1998-04-27**

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**PAW - (ASAG ) ASAHI GLASS CO LTD**

**TI - Glass plate manufacturing method** - involves forming groove or ridge of molten metal near edge of strip shaped glass maintained in position in which gases above glass and molten metal are interrupted